



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,701	05/05/2005	Thomas J. Nosker	70439.00026	7140

29880 7590 12/06/2011

FOX ROTHSCHILD LLP
PRINCETON PIKE CORPORATE CENTER
997 LENOX DRIVE
BLDG. #3
LAWRENCEVILLE, NJ 08648

EXAMINER

MULLIS, JEFFREY C

ART UNIT	PAPER NUMBER
----------	--------------

1765

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

12/06/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipdocket@foxrothschild.com

Office Action Summary	Application No. 10/501,701	Applicant(s) NOSKER ET AL.	
	Examiner JEFFREY MULLIS	Art Unit 1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1, 12-20, 22, 24 and 25 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1, 12-20, 22, 24 and 25 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 12-20, 22, 24 and 25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 14 of copending Application No. 12/295574. Although the conflicting claims are not identical, they are not patentably distinct from each other because applicants characteristic is assumed inherent given that all other limitations are present in copending claim 14.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1, 12-20, 22, 24 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Leclair in Fig. 4 on page 4725 discloses an SClair 59 C HDPE/M-2500 polycarbonate blend wherein use of applicants' proportions result in a modulus which is the same or even substantially less than the additive contribution of the components indicating that applicants have not enabled production of compositions with the claimed characteristic of a modulus greater than the additive contribution of each polymer. Furthermore note the second column at line 2 et seq of page 4725 where it is disclosed that at high proportions of PC (i.e. higher than 40%), PC is the continuous phase and therefore applicants limitation in claim 1 24 that PC is PC is distributed in the matrix phase is enabled only for PC concentrations below 40%.

Note Casey in Table II indicating that SCLAIR 59C has a melt Index of only 0.40. Note Kieser indicating (third "IT" entry in the abstract) that "M 2400" polycarbonate is

Art Unit: 1765

“Makrolon 2400”. Note Krishnan at the paragraph bridging columns 3 and 4 where use of MAKROLON 2400 is disclosed and note the paragraph bridging columns 5 and 6 where injection molding is disclosed. Note Chung at column 3, lines 46-53 where use of MAKROLON 2400 is disclosed and note column 4 lines 23-27 where injection molding is disclosed. Note Boyd at column 3, lines 40-65 where use of MAKROLON 2400 is disclosed and note column 2, lines 25-55 where injection molding is disclosed. Casey, Kieser, Krishnan and Chung therefore indicate that Leclairs individual comports read on those of the instant claims. It is noted that applicants figures show modulus vs composition curves for various compositions. However there is no detail in the specification regarding the specific materials used except that they pertain to HDPE and polycarbonate (for instance specific melt flow rates, type of polycarbonate etc) nor is the method of actually forming the blends disclosed. While possibly many of these factors have no bearing on forming blends with applicants characteristics it can not be concluded that any blend showing positive deviation from the law of mixtures in the figures can be said to have applicants characteristics nor is it clear how to choose materials to produce blends having applicants characteristics given the disclosure of Leclair.

With regard to applicants characteristic in lines 5-7 of claims 1 and 24, note Xu, newly cited disclosing 20/80 PC/HDPE blends with applicants MFR (see experimental on page 1088) but nonetheless discloses that the domains formed are not parallel (see the numerous SEM images). As applicants disclose nothing more than Xu for producing

Art Unit: 1765

compositions with the characteristic at lines 5-7 of claims 1 and 24, this characteristic is not enabled.

Claims 1, 12-14, 20, 24 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Figure 5 shows a small portion of the composition range barely meeting applicants characteristic requirements those skilled in the art would not assume that applicants were in possession of the concept of compositions having applicants "additive contribution" characteristic for other melt flow rates besides those associated with the materials of Figure 5 or for the specific range of concentrations shown in the figures. Applicants combination of limitations regarding melt flow, concentrations, and "additive contribution" are therefore new matter and claims 1, 12-14, 20, 24 and 25 therefore contain new matter.

With regard to claims 1, 24 and those dependent thereon, the term "nano-domains" encompasses domain sizes greater than those of 30-40 nm referred to in figure 2, nor are the claims limited to 10/90 ratios of PC/HDPE to which applicants figures pertain and for which applicants rely on for support of the limitation of "fiber

Art Unit: 1765

shaped nano-domains” or “nano-domains ...aligned essentially parallel in said HDPE” and applicants limitation in lines 5-7 of claim 1 (as well as claim 24) is therefore new matter.

US 2007/0082995 and 2002/0099160, previously cited of interest disclose MFR data at paragraphs 92 and 158 respectively for various polycarbonates.

Applicant's arguments filed 9-6-11 have been fully considered but they are not persuasive.

Applicants amendment to claim 15 has overcome the rejection of claims 15-19 and 22 under 35 USC 112, first paragraph based on new matter. Claims 15-19 and 22 do not contain new matter. It is noted that claim 15 is not rejected based on any issue not relied upon in rejecting any other independent claim while claims 1 and 24 contain issues under 35 USC 112, first paragraph not present in claim 15.

Claim 25 depends from claim 1 which differs substantially from original claim 1 from which original claim 8 ultimately depended.

With regard to applicants amendment to lines 5-7 of claim 1 and 24, lines 8-18 of the specification only refer to the figures and do not contain any disclosure regarding alignment of nano domains and for the reasons set out above applicants amendment to lines 5-7 of claim 1 and 24 is new matter.

Applicants argue that LeClair does not disclose formation of the blend of applicants figure 1. However, there is nothing in LeClairs disclosure that their blends are amorphous PC dispersed in an HDPE matrix contradictory to applicants Figure 1.

Art Unit: 1765

Applicants (fibrous) PC domains are dispersed in HDPE also and polycarbonate is generally described in the art as amorphous and whether or not a polymer is amorphous or crystalline generally depends on the structure of the polymer. Both applicants and LeClairs' polymers are polycarbonate. While it may well be correct that LeClairs compositions containing PC as the matrix. However, LeClair also discloses compositions in which PC is the disperse phase (see Figure 3 and the first complete paragraph in column 2 on page 4725 of LeClair) and discloses that in such compositions the modulus is "additive" (column 2, lines 5 et seq of page 4725). However, applicants are not claiming compositions in which the modulus is "additive" but rather one which is "greater than the additive contribution of each polymer". Applicants are that claims 1, 15 and 24 have been amended so that they are limited to the descriptive support depicted in figures 1 and 2. Firstly however, claim 15 has not been amended as alleged. Secondly applicants amendment does not change the fact that Leclair and applicants use the same materials and may also process into articles using compression molding (paragraph 22 of applicants' published application and "processing" under "(e)xperimental" in LeClair. It is thus not clear what needs to be done to create the material of the claims which LeClair (who apparently does not create materials with applicants characteristic) is not doing. Applicants newly added limitation does not help as use of materials and or process conditions is ultimately what creates a particular material with its inherent characteristics (including parallel nano domains). Furthermore note Xu, newly cited disclosing 20/80 PC/HDPE blends with applicants

Art Unit: 1765

MFR (see experimental on page 1088) but nonetheless discloses that the domains formed are not parallel (see the numerous SEM images).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Jeffrey C. Mullis
M-F, 9-5 pm at telephone number 571 272 1075.

Jeffrey C. Mullis
Primary Examiner
Art Unit 1765

JCM

11-30-11

Application/Control Number: 10/501,701
Art Unit: 1765

Page 9

/Jeffrey C. Mullis/

Primary Examiner, Art Unit 1765